

MICRARIONTAS OF DESERT RANGES BORDERING
THE EAST SIDE OF COACHELLA VALLEY
AND SALTON SINK, CALIFORNIA

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During a number of years past the writer and his wife have made frequent visits to the desert ranges in the central part of the Colorado Desert, California. A search for land shells has been made in every locality visited, with varying success. The total collection of *Micrariontas* obtained to date, although by far the most complete from the region, still lacks specimens from many localities. A study of this collection, however, has brought to light some interesting facts in distribution which may be worthy of record.

The ranges in the section under discussion are, from northwest to southeast, the Indio and Mecca hills, Orocopia, Chuckwalla, Little Chuckwalla, and Chocolate mountains. These are all separated by expanses of desert floor of varying width, excepting the two Chuckwallas, which are connected by low hills. This mountain region is, on the whole, very rugged and rocky, with sparse vegetation which consists mainly of low brush, with occasional mesquite and palo verde trees, and scattering groves of *Washingtonia* palms. In some parts of these mountains snails are either entirely absent or very scarce. In many apparently favorable localities search was entirely unsuccessful, and in others the specimens found were almost all dead and bleached. The rarity of some of these snails soon becomes apparent to the field collector. An immense amount of work is necessary in order to obtain even a small representative collection. In most sections a search may be considered successful if a day's hard work moving rocks results in finding two or three living, adult specimens. For instance, on our latest week-end trip 450 miles were traveled by auto, three mountain sides were climbed, and at least ten hours occupied in moving rocks, with a total bag of one living snail (unfortunately albinistic) and half a dozen dead ones good enough to bring in. Any student planning to collect a complete representation of the snails of this region should allow plenty of time to the undertaking.

Below is a list of the species known to inhabit the ranges under discussion, with brief notes on their distribution. As the writer is uncertain as to the character of relationships between

the different forms, and between them and species from other localities, they are treated here as distinct species.

MICRARIONTA MILLEPALMARUM Berry. Indio and Mecca hills. Although the type locality of this snail, Thousand Palms Canyon, Indio Hills, is extremely barren and lacks favorable rock slides, it was found to be fairly easy to collect. Numerous examples were taken from under rocks piled up by storm waters along edges of gullies. An additional locality is in the Mecca Hills, near the Mecca-Blythe highway, at a point about one mile southwest of Shaver's Well. Thirteen specimens secured here are referred to *millepalmarum*, although they are slightly darker in color than typical.

MICRARIONTA OROCOPIA sp. nov. (Pl. 2, figs. a to c). About the same size as *M. millepalmarum*, but with heavier shell, much darker coloration, and wider brown band at the shoulder. Color nearly like that of *M. chuckwallana*, but differs from that species in much smaller size and less rounded body whorl. Papillae on early whorls in diagonal rows, as in the *M. rowelli* group. Distribution, Orocopia Mountains.

Type, No. 1060 Los Angeles Museum. Type locality, rock slide on side of canyon on south slope of Orocopia Mountains, about two and one-half miles north of Dos Palmas Spring, Riverside County, California. The type and about sixty additional specimens collected by G. and Ora A. Willett, January 1, 1939. Paratypes in Academy of Natural Sciences of Philadelphia, and California Academy of Sciences. Measurements of type: Max. diam., 14; min. diam., 11.5; alt., 8.2 mm. The largest specimen taken (defective) measures: Max. diam., 15.3; min. diam., 12.4; alt., 8.2 mm.

Near the northeastern extremity of the Orocopia Range, at a point about twenty miles distant from the type locality, eight rather poor specimens were taken that appear referable to this species.

MICRARIONTA RIXFORDI Pilsbry. Eight specimens secured at the northeast end of the Orocopia Range. The valley is only about three miles wide between this point and the Eagle Mountains, where *rixfordi* is the only known species. Although the eight specimens of *M. orocopia* mentioned above were taken within one-half mile of this lot of *rixfordi*, the peculiar, irregular arrangement of papillae on the early whorls of the latter species easily distinguishes it.

MICRARIONTA CHUCKWALLANA Willett. Secured in two localities in the Chuckwalla Mountains, the type locality, near Corn Springs, and near Chuckwalla Spring. In the latter locality four examples were taken, together with specimens of the next species.

This, the largest helicoid known from the region, is apparently rare in both localities where it was found. A considerable amount of work was required to produce a small series, mostly of imperfect specimens.

MICRARIONTA BRUNNEA Willett. Apparently confined to the southeast end of the Chuckwalla Mountains, the type locality being near Chuckwalla Spring. Although this species appears rather closely related to *M. millepalmarum*, there is evidently considerable territory intervening between the ranges of the two. The fact that this and the last species were collected together is very interesting, and a feature apparently not previously recorded among our California *Micrariontas*.

On December 26, 1938, the writer and his wife visited the Little Chuckwallas for the first time. After getting within about three miles of the range by auto, the remainder of the distance was covered on foot. A three hours' search at a point about six and one-half miles west of Wiley Well turned up about twenty fairly good shells. These are mostly cream-colored, immaculate, but six or seven specimens show very faint traces of a band at the shoulder. They probably represent an albinistic colony of *M. brunnea*. At any rate, it appears inadvisable to give them a new name, as some specimens are practically indistinguishable from unbanded examples of *M. mccoiana*, from the McCoy Mountains, although, in series, the Little Chuckwalla shell is browner. The tendency to albinism in these two forms probably furnishes an example of parallel development, one (*mccoiana*) being derived from *M. unifasciata*, and the other from *M. brunnea*.

MICRARIONTA CHOCOLATA Willett. This species, undoubtedly a close relative of *M. chuckwallana*, is, so far, known only from the type locality, near Beal's Well, Chocolate Mountains. It is apparently a rare shell, a recent search of four or five hours near the type locality having failed to produce a single good specimen. It is hoped that collecting trips can be made to other sections of the Chocolate Mountains in the near future.



PLATE 2

Micrarionta orocopia Willett.

Type x 2.